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**Recent Trends in the Study of Late Bronze Age  
Ceramics in Syro-Mesopotamia and Neighbouring  
Regions**

Proceedings of the International Workshop in Berlin, 2 – 5  
November 2006

edited by  
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**DEUTSCHES ARCHÄOLOGISCHES INSTITUT  
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The idea to hold a workshop on „Recent Trends in the Study of Late Bronze Age Ceramics in Syro- Mesopotamia and Neighbouring Regions” was born during the Berlin ICAANE in 2004. Subsequently, 21 speakers followed our invitation to Berlin, where between November 2 – 5, 2006, we discussed the current state of research on Late Bronze Ceramics in a very large area of the Near East covering Syro- Mesopotamia and Iran, the Levant, and Northwest Arabia.

From the beginning, it was our aim to go beyond a mere presentation of materials and contexts in the framework of on-going scientific excavations, important as they are, since we intended to focus on reflecting our own research strategies in the present and the future. We are very grateful, that this approach was followed by the contributors. The fact that over 80% of the participants also decided to publish their results is further proof of the relevance of the theme. This volume can be contextualised with previous synopses on Bronze Age and Iron Age Ceramics in areas within the Near East (Al Maqdissi – Matoïan – Nicolle 2007; Hausleiter – Reiche 1999; full references see *infra*), though, as outlined before, differing in approach.

The plan to hold the workshop received a very positive response from the Orient-Department of the German Archaeological Institute, Berlin. As usual, between planning and publication a number of tasks had to be dealt with, and various institutions and individuals were involved in these activities. The German Archaeological Institute and the Gerda Henkel Stiftung, Düsseldorf, substantially funded the workshop (applications by Hausleiter as well as of Beuger and Hausleiter, respectively). The Dean of the Faculty of History and Philology of the University of Vienna offered additional financial support (application Luciani). Melanie Münzner and Jana Rogasch assisted the organisers in the preparation of the workshop. In our plan to publish the proceedings, we received strong support from Ricardo Eichmann and Margarete van Ess as series editors of *Orient-Archäologie*. In addition, Ricardo Eichmann provided the financial basis for editing the volume. The editing section of the Orient Department accompanied the publication process. Claudia Bührig and Susanne Kuprella gave useful information to the editors. The new head of section, Kristina Pfeiffer, was extremely helpful and supportive in the final part of the publication process.

Dörte Rokitta-Krumnow acted as editorial assistant preparing the layout of the entire volume and communicating with the authors. To all the institutions and individuals mentioned above we express our warmest thanks. We would not like to conclude this preface without offering sincere apologies for the considerable delay in publication. We are deeply indebted to all the contributors to this book for their patience.

August 2013

Marta Luciani (Vienna), Arnulf Hausleiter (Berlin), Claudia Beuger (Halle)

# Some thoughts on the relationship between the practice of ceramic studies and explanatory frameworks for the Late Bronze Age in the Middle East

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*Abstract: A review of recent synthetic studies dealing with the Late Bronze Age suggests that ceramic data play a relatively minor role in such texts, a point confirmed by the paucity of substantial articles on ceramic topics in the main regional journals. This forms a marked contrast to the effort devoted to ceramic studies both during fieldwork and in excavation reports. A review of the manner in which ceramic data is presented in such reports suggests that while areas of genuine innovation can be identified, the detailed information provided in many fieldwork monographs is not optimally aligned with the needs of those undertaking higher-level synthetic studies. It is suggested that this may reflect a continuing adherence to methods for dealing with pottery that took shape in the mid-20th century, when scholars' expectations of what could be achieved through pottery remained modest. It is suggested that there is an urgent need to revise both field and publication procedures, so that ceramic data is able to fulfil its potential as a major contributor of information on past societies.*

Keywords: Ceramics, LBA, methodology, excavation reports, critique, publication

Having been invited by the organisers to provide an opening talk at this meeting in order to provoke discussion, I felt that an effective way to do this would be to lay bare some of the conceptual and methodological problems that I feel currently hamper efforts to make effective use of ceramic data within the study of the Late Bronze Age (LBA) in the Near East. The present article therefore presents a range of observations, questions and suggestions concerning the way in which ceramic data has been used by scholars working on the period, and its role and value when deployed in a situation in which a historical narrative drawn from documentary sources provides the basic framework of analysis. It is most definitely not intended as a review of current material culture theory, or a comprehensive overview of the state of ceramic studies in Late Bronze Age archaeology. Rather, its aim is to make readers think about what we are doing. If some then decide that the continuation of the *status quo* as regards ceramic studies is not the best way forward, I will count that as a success.

There exists a mass of textual data which has great potential to shed light on ancient society and economy when analysed from appropriate standpoints<sup>1</sup>. However, while the documentary record for the LBA is on occasion very richly textured, this is not the case for all parts of the Near East. More commonly we have small windows of information which illuminate either specific areas of activity, or the political or economic history of particular localised regions for short periods: the archives from Alalah and the Amarna letters are good examples. However, historical data as it features in most synthetic archaeological accounts takes the form of a broad-sweep across the centuries in which 'history' consists mainly of an account of the relationships between major political units, with the internal dynamic being essentially the linear ordering of events. The difficulties that a periodization based upon historical, rather than material indicators, has posed for Mesopotamian archaeology have recently been noted by M.-H. Gates<sup>2</sup>. Such accounts provide no more than an outline of the main historical developments, and by their nature remain silent on many aspects of LBA society and economy.

These contrasts, in part, encapsulate the tensions between largely European tradition of particularistic historical archaeology which may involve a large-scale amassing of data, and a lengthy commitment to a particular limited region, or even site, and an Anglo-Saxon 'anthropological' approach which stresses shorter-term projects often designed to answer specific research questions, and which is less strongly connected with the discipline of history<sup>3</sup>. It seems to me that these two approaches have rather different expectations of ceramic studies. Using an 'anthropological' approach a ceramic assemblage may be analysed to investigate patterns of consumption, or the extent of specialized production within a particular site or region<sup>4</sup>. What is less straightforward is linking individual case-studies in ways that will allow a large-scale picture to emerge, yet it is just this that is required to open a dialogue with those taking a historical approach. In contrast, those working within a historical framework tend to focus upon the space-time characterization of the ceramic assemblages from individual sites or regions<sup>5</sup>. The issue here is generally the absence in many cases, of a sense that ceramics might be used to investigate social or economic dynamics. Rather than continue with abstract discussion, it seems appropriate at this point to look at the contribution made by ceramic evidence to several recent synthetic accounts of the LBA.

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<sup>1</sup> e.g. Chavalas 1996; Fleming 2004; Schloen 2001; Zeeb 2001.

<sup>2</sup> Gates 2007, 69.

<sup>3</sup> Bernbeck – Pollock 2004, 338–340; Matthews 2003, 19–26.

<sup>4</sup> e.g. Knappet 2005; Stein – Blackman 1993.

<sup>5</sup> e.g. Mazzoni 2002; Nigro 2002.

## ***Archaeological usage of ceramic data***

### **Ceramic data and period syntheses**

Consideration of several overviews of the LBA reveals some very interesting patterns in terms of the role played by ceramic studies. It is important to understand that the remarks below are not meant to be critical of these accounts, but are designed to provide an insight into the way in which ceramic data are deployed, or at least put into position, to answer wider questions, and thus contribute to higher-level synthesis. The texts chosen<sup>6</sup> were selected on the basis that each was an authoritative, recent overview, which has appeared in a well-known and widely-disseminated book or series, and which is likely to be widely used by students.

These texts reveal a substantial overlap in terms of their basic narrative frameworks and approaches to the material. Thus, rather than treating the individual texts in detail, I have used summary tables to demonstrate the extent to which each addresses a particular range of themes, and to chart the relationship between these themes and the deployment of illustrative material. This information is then used to draw a number of overall conclusions regarding the coverage and points of similarity. All the texts share a common feature in that the core framework around which the material is organized consists of a narrative which charts the fall and rise of various polities, and which has been constructed, by and large, from documentary sources. What is particularly intriguing is that with the exception of Heinz<sup>7</sup> which takes an avowedly historical approach (and therefore cannot provide information relevant to Figs. 1 and 2), all of the contributions are situated within larger volumes in the titles of which the word *archaeology* features prominently. *None* claims to offer a *history* of the Late Bronze Age.

One point which emerges very clearly from these articles is that when the proportion of the text devoted to different topics is analysed, it is clear that discussion of pottery and its interpretation rarely constitutes more than 10 % of the article, and in many cases significantly less (Fig. 1). While pottery might be considered to provide good material for illustrations, even here ceramics hardly exceed more than 20 % of the total number of images which accompany the text, and in two cases, this figure is 10 % or less (Fig. 2).

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<sup>6</sup> Akkermans – Schwartz 2003, 327–359; Bunimovitz 1995; Gonen 1992; Heinz 2002; Huot 2004; Strange 2001.

<sup>7</sup> Heinz 2002.



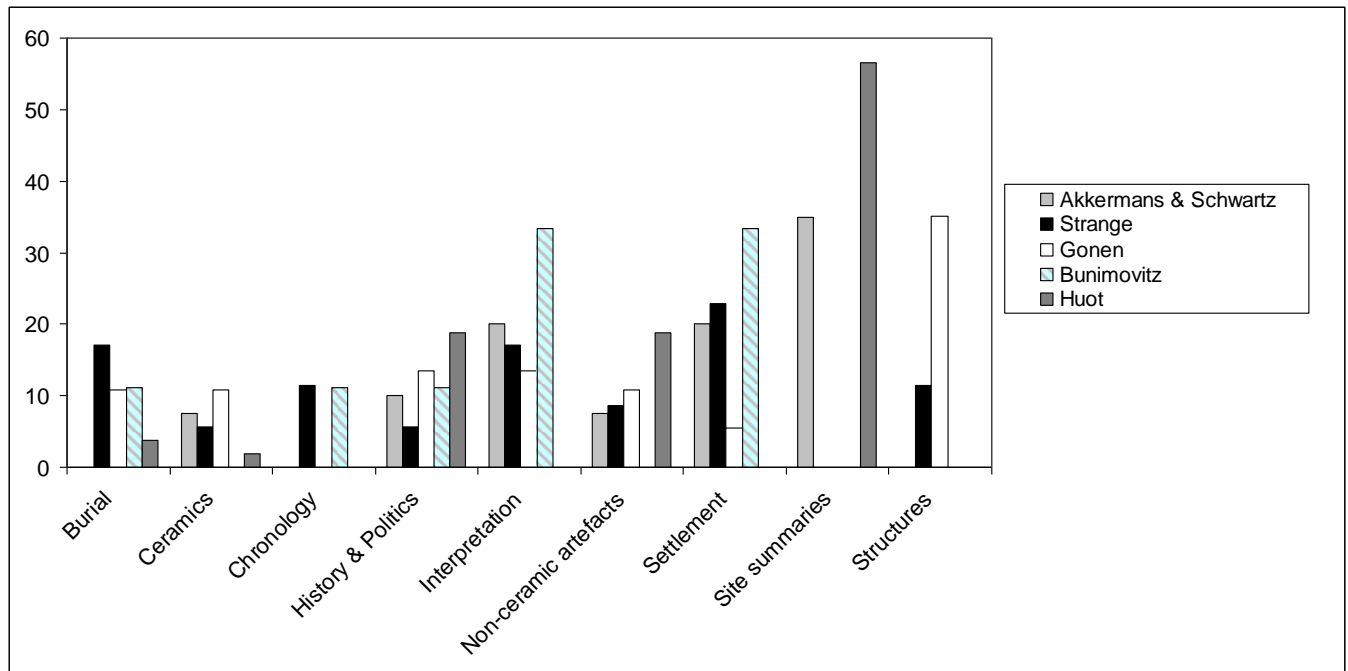


Figure 1. Approximate percentage of pages of text allocated to each key topic.

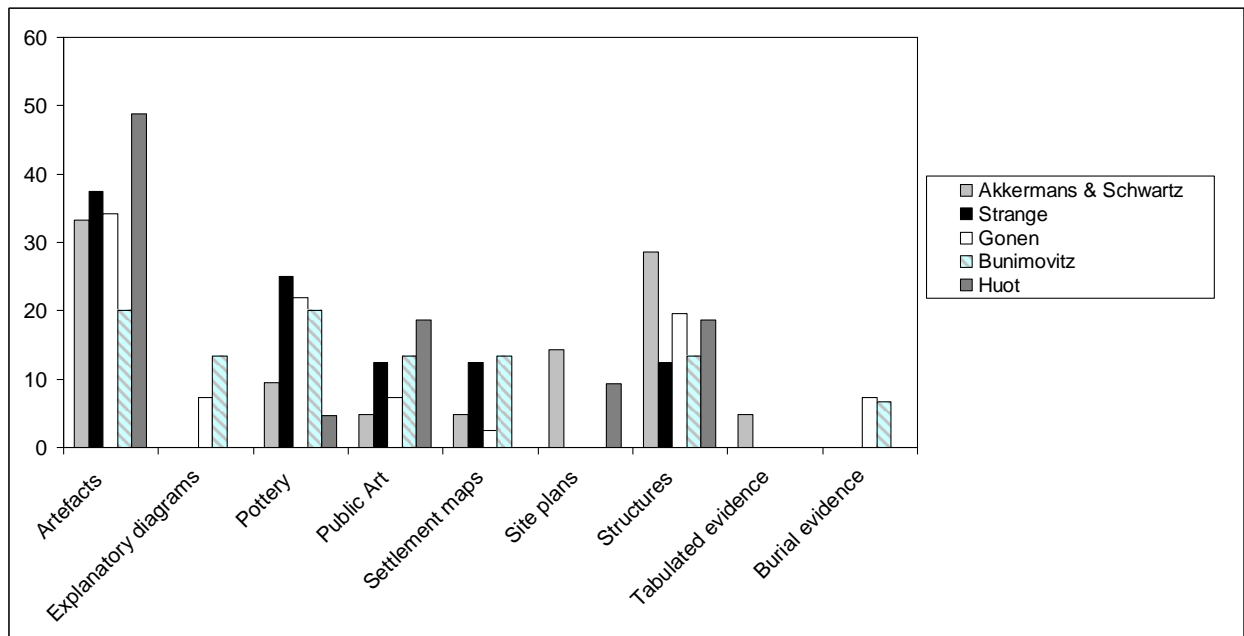


Figure 2. Approximate percentage of images allocated to each key topic.

In practice, discussion of pottery appears to be centred upon no more than five main topics.

1. It is used as a chronological indicator.
2. Unusual wares, such as material of Cypriot and Aegean origin, or the so-called Nuzi wares, which may represent special purpose vessels are generally discussed in terms of their role as indicators of trade and inter-regional contact.
3. The general continuity between MBA and LBA ceramic forms is noted, although without specific form by form discussion.
4. The existence of a degree of regional variation is acknowledged, although the social and economic implications of this are not generally considered.
5. The presence or emergence of new ceramic forms or changes in technology are occasionally mentioned, but usually in the context of their value as chronological markers; there is little or no comment with respect to the implications of such developments for changes in economy or social practices

The single most striking feature of all of these accounts from the standpoint of ceramic analysis is the apparent reluctance to integrate the discussion of pottery with wider themes, for example discussion of the nature of LBA society and economy, the cultural significance of the observed regional variation, or the variety of ways in which pottery can be deployed in mortuary contexts. Overall, there is a sense in the majority of these texts that while pottery has to be 'covered', it is not entirely obvious how this ought to be done in the context of a holistic 'archaeology' of a region or period. The fact that six scholars from a range of different backgrounds appear to have encountered similar difficulties suggests that there is a genuine mismatch between favoured modes of explanation, and the nature of the available ceramic data. Thus one, or more probably a combination, of the points listed below is likely to apply.

1. Our favoured narratives are centred around topics to which ceramic studies can make little contribution, suggesting either that our current narratives are drawn from too limited a range, or if the narratives are deemed adequate, that ceramic data are of rather limited value.
2. We have been slow to grasp which concepts, questions and explanations can be furthered effectively using ceramic data, and so have not developed reliable means for deploying ceramic data to enrich wider narratives.

3. The available ceramic data has been recorded, analysed or presented in ways that are not well suited to answering complex multi-scalar research questions.

The virtual absence of ceramics from two recent overview volumes<sup>8</sup> appears to confirm the limited contribution made by pottery to wider discussions.

### ***Ceramic data: the role of specialist regional journals***

While ceramic data appears to have made relatively little impact upon synthetic overviews, it might be argued that detailed ceramic-based studies are more likely to be found in the specialist literature. However, a review of the topics appearing in recent issues of several key European archaeological (*i.e.* not language-centred) journals with a declared focus upon the ancient near east suggests otherwise (Table 1). The following is not claimed to represent a scientific analysis, as it is:

- based upon a selection of those key journals that were readily available to the writer;
- possible to debate the specific category to which individual articles have been assigned.

However, as it is likely that only large-scale reallocations between categories would significantly modify the trends which are presented below, it is felt to constitute a reasonable database from which to draw conclusions.

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<sup>8</sup> Snell (ed.) 2007; van de Mieroop 2007.

Journal & volumes covered in survey	Number of major articles (nearest ten)	Articles with a ceramic-focus	Articles focused on LBA Near East ceramics
<i>Baghdader Mitteilungen</i> (1997-2006)	120	2	0
<i>Iraq</i> (1998-2006)	90	2	0
<i>Levant</i> (1997-2006)	120	12	3
<i>Syria</i> (1998-2005)	80	2	1
<i>Mesopotamia</i> (1997-2006)	40	17	2
<i>Journal of Arch. Science</i> (1997-2008)	1000+	100+	5*
<i>Archaeometry</i> (2001-2007)	ca. 250	ca. 60	4*

\* many of these deal with Cypriot or Aegean imports.

Table 1. Representation of ceramic-based articles in key journals (last 7-10 years).

With the exception of *Levant* and *Mesopotamia* as few as 2 % of the articles published in the above journals in recent years dealt with pottery. Moreover, the articles which appeared in *Mesopotamia* were predominantly descriptive presentations of primary excavation material, in particular from past Italian excavations at sites in the Hamrin, Nimrud and Babylon, rather than synthetic studies. In the case of articles appearing in *Levant*, the majority were presentations of material from individual sites, many of these of Islamic date. However, the journal also published a regional overview of Ottoman period ceramics<sup>9</sup>, a diachronic analysis of grave goods from Middle and Late Bronze Age Ashkelon in which pottery took a prominent role in the discussion<sup>10</sup>, and a petrographic study of second millennium BC pottery from Tell Hadidi in Syria<sup>11</sup>. The single article on LBA ceramics which appeared in *Syria*<sup>12</sup> reported the results of a laboratory investigation of a particular category of material from Ras Shamra. The virtual absence from all of these journals of detailed comparative, thematic or interpretational ceramic studies suggests that the situation reflected in the introductory texts is indicative of that in the discipline as a whole. Table 1 also shows that the situation is little different when it comes to more avowedly 'scientific' journals such as *Journal of Archaeological Science* and *Archaeometry*. While both contain a significant number of articles with a ceramic focus, few of these discuss material from the ancient near east. Moreover, most of those that do, focus upon pottery from Cyprus or the Aegean – essentially imports. In addition, the implications of the laboratory-based studies are not always fully

<sup>9</sup> Milwright 2000.

<sup>10</sup> Baker 2006.

<sup>11</sup> Mason – Cooper 1999.

<sup>12</sup> Matoïan – Bouquillon 1999.

developed in the more generalist literature. This is in no little part because of the disjunction between the results of a particular case study, and the ability of scholars to follow-through its implications for the far larger body of material which was not analysed, and which may have been organized or published according to traditional categories which are hard to relate to those implied by laboratory analysis.

### **The publication of ceramic data through final excavation reports**

A reader new to the subject might conclude in light of the apparent lack of interest in ceramic data at the level of synthesis and specialist studies, that the analysis of pottery would constitute a relatively marginal aspect of archaeological activity. However, a visit to any working field project quickly reveals that this is far from being the case, as revealed by the publication of primary ceramic data through excavation reports. I have elected to assess the role of pottery within these publications *via* an examination of a number of recent major excavation reports, each of which presents a significant body of LBA ceramics. It is important to note that I have made no attempt to be comprehensive. Rather, the subset of reports selected for study was chosen from the publications that were readily available to the writer as of autumn 2007, and was designed to include material from a range of different regions and sponsoring nations. Rather than describing each report individually it was decided to review them against a set of criteria. These are outlined in Table 2 below.

<b>Excavation Report</b>	<b>Tell Arqa (Phases L &amp; K = LBA)</b>	<b>Tell Brak (LBA)</b>	<b>Tell Afis LBII-Iron I</b>	<b>Lachish</b>	<b>Tall Abu al-Kharaz (Area 2, Phases VI &amp; VII)</b>	<b>Beth Shan Area Q</b>	<b>Tell Yin'am (local pottery)</b>	<b>Kamid el-Loz</b>
<b>Location</b>	Lebanon	Syria	Syria	Israel	Jordan	Israel	Israel	Lebanon
<b>Home country of research project</b>	France	U.K.	Italy	Israel	Sweden	Israel	U.S.	Germany
<b>Publication</b>	Thalmann 2006	Oates – Oates – McDonald 1998	Venturi 1998	Yannai 2004; Goren & Halperin 2004	Fischer 2006	Mazar & Martin 2006; Martin 2006	Liebowitz 2003a, 2003b; Folk & Liebowitz 2003	Penner 2006
<b>Typology</b>	Yes	No	No	Yes	High level form groups only	Yes	Yes	Yes
<b>Approx. No. of line drawings</b>	250	700	125	600	100	75	425	750
<b>Macrofabrics?</b>	Defined	No	Described in catalogue but wares not defined	Described in catalogue but wares not defined	Described in catalogue but wares not defined	Described in catalogue but wares not defined	Described in text.	Described in catalogue but wares not defined
<b>Analytical data / scientific analysis / petrography?</b>	No	No	No	Yes, but not a systematic programme	No	Egyptianized forms only	Yes	No
<b>Parallels?</b>	Type by type discussion	Occasional	Some discussion	Discussion of nearby sites	Limited	Discussion of nearby sites	Type by type discussion	No
<b>Unit of Analysis</b>	Stratig. phase	Broad chronological period	Stratig. phase	Stratig. phase	Stratig. phase	Stratig. phase	Stratig. phase	Stratig. Phase and architectural

								unit
<b>Intra-site analysis?</b>	n.a.	None	No	Comparison with earlier excavations	Mainly between phases	Some discussion	Limited	Yes
<b>Inter-regional comparison?</b>	Generalised	Sporadic	For some forms	With neighbouring sites	For some forms, not assemblage	By form, not assemblage	Some inter-assemblage discussion	Mostly focused upon imports
<b>Discussion of assemblage?</b>	Mostly in terms of chronological development	No	Mostly regarding chronology	Mostly regarding chronology	Mostly in terms of chronological development and synchronisms	Mostly regarding chronology	Chronology and regional groups	Mostly in terms of chronology and inter-site distinctions
<b>Quantification of assemblage?</b>	Selective, based on material from 'closed' contexts only (p. 92-3)	No	Not published	Inaccurate as based on "complete vessel and sherds which excavators decided to save" (see p. 1057)	Yes	Yes, for rim sherds from secure loci	Presented as proportions, not absolute numbers	Yes, but only material from certain deposits
<b>Listed by context ?</b>	Illustrated sherds	Illustrated sherds	Illustrated sherds	Illustrated sherds	Yes	Illustrated sherds, summary tables for good contexts	Yes	Yes
<b>Master Listing of contexts?</b>	No	Yes	No	Yes	No	Yes	Yes	Published elsewhere

Table 2. Analysis of main trends in the discussion of key themes within reporting of primary ceramic data from excavations

I believe that it would be invidious to single out individual reports for detailed discussion. Among other reasons, the data available to the ceramic specialists often reflects decisions taken by others, many years ago. However, as these volumes typify the material with which we have to work, the nature of the data which they provide warrants discussion, and a quick survey reveals that there are marked inconsistencies, not only in the nature and quantity of information provided, but also in the way in which the data has been created. The next section therefore tries to draw-out the main patterns according to the various criteria listed in Table 2.

## **Shape typology**

### **Is a formal typology of vessel forms, a type-series, established, or is the material simply presented without further subdivision?**

Most reports provide a formal classification scheme for expressing vessel shape. These provide a useful means of organising the data and a basis upon which material can be quantified, and thus a means by which to characterise the structure and nature of the assemblage. Various issues can make it hard to compare assemblages at an inter-site level. For example, the possibility that types have been defined differently by different specialists, and there is always doubt as to whether the classifications created by modern ceramicists would have been recognised as significant by the users of the material in the past. Where no typology is presented, researchers are largely restricted to noting individual parallels between forms from different sites.

#### *Approximate number of line drawings published in the report*

Many reports include large numbers of line drawings, suggesting that vessel shape, rim form in particular, is seen as the key to the interpretation of ceramic data. However, if excavators are presenting their material in terms of a typology, it is often necessary to publish a sufficient number of illustrations to represent the full range of variation encompassed by each type. Many excavators would also seek to publish all unique forms, for the simple reason that their significance may become apparent only at some point in the future. It is clear, however, that there is no agreement among specialists as to what constitutes the requisite number of forms that ought to be published in order to communicate effectively the range and character of an assemblage.

## **Fabrics**

*Is a series of macro-fabrics (i.e. fabrics identified by hand-lens or the naked eye) defined and described, and is the relationship between vessel form and fabric clearly documented?*



Some reports provide a good discussion of fabric classes. However, in many cases, while a brief fabric description is provided as part of the text entry which accompanies each illustrated sherd, the reports lack a clearly defined set of macro-fabrics to which these individual descriptions can be related. As the various descriptions are therefore not grouped or correlated, there can be little discussion of preferred combinations of clay and non-plastic inclusions, their relative frequency, and the relationship between fabric, inclusion-types and vessel form. In other words there is little data with which to characterize the assemblage as a whole. Where there is no systematic description of fabrics, the value of carefully defined typologies, and the many pages of line drawings is considerably reduced. Yet without an understanding of these patterns, inter-assemblage comparisons seeking to address anything other than broad shape categories are virtually impossible.

### **Analytical data/scientific analysis/petrography**

*Is petrographic or other analytical data presented for the fabrics? Is this clearly linked to the actual discussion of the nature of the assemblage?*

The majority of these reports lack the kind of systematic petrographic or other analytical data which are necessary if researchers wish to understand patterns of raw material usage, identify possible loci of production and assess the origin of imports. In several cases, petrographic reports where present, concentrate upon a specific component of the assemblage. There may be understandable reasons why particular groups of pottery were felt to warrant more detailed examination, although the rationale by which particular sub-sets of material have been analysed is not always clear. Systematic attempts to integrate analytical data with ceramic groupings remain the exception, with results too often consigned to an appendix without further interpretation. As analytical data is a prerequisite for the kind of studies of site-specific production and consumption practices, which are an essential preliminary step to analysis at an inter-site level, its absence effectively prevents the development of certain lines of research.

### **Parallels?**

*Are specific types or forms compared systematically to material from contemporary sites in the region?*

Comparisons with material from other sites are usually, but not always present. These generally consist of shape-based comparisons, which are presented within the text on a form-by-form basis. Thus while positive parallels are usually clear, the difficulty arises when no parallel for a particular form is cited as present at a named comparator site. In such cases, it is not always clear whether this means that vessel type was not present at the comparator site, or whether it has simply not been mentioned in the text because better *comparanda* existed somewhere else, and these have been cited in preference. In fact, systematic comparative studies pitched at an inter-assemblage level are few. This is a pity because knowledge of the strength of the relationship between assemblages at different

sites, and the way in which these vary over time, are likely to prove of fundamental importance to the investigation of cultural and economic relationships at intra- and inter-regional scales.

All that would be required to make the situation clear is a table listing all types present at the site in question in one column, with subsequent columns documenting the presence or absence (insofar as the published documentation permits,) of each form at the key comparator sites. This partly results, of course, from the way in which material from potential comparator sites has been published, and I would echo the call made by several contributors at the workshop that researchers avoid the false security provided by frequent cross-referencing to poorly stratified older excavations such as Hama and Megiddo. Doing this simply ‘solves’ the problem by going to the lowest common denominator, and thus squeezing most of the added-value out of the analysis.

### **Unit of Analysis**

*What is the basic unit that is used for grouping the ceramic data for presentation and discussion? Possibilities include: context, architectural unit, stratigraphic phase or chronological period.*

In most cases, ceramics appear to be published and discussed in terms of the overall stratigraphic phase from which they come. While this is a common practice, and has proven its value as a way of building regional ceramic chronologies, it needs to be combined with careful contextual analysis if we are to hope to use the evidence of pottery to investigate aspects of social practice. A recent study<sup>13</sup> has shown how the traditional practice of publishing Iron Age II pottery from the southern Levant by ‘stratum’, has rendered it virtually impossible to reanalyse most published datasets, other than in terms of their chronological positions. It is important to understand that by removing pottery from its original context, and publishing it in a way that makes subsequent reanalysis difficult, the material is effectively stripped of much of its investigative potential. It should be obvious to all that even sherd material from domestic contexts, including midden material<sup>14</sup>, can provide valuable evidence on way in which material culture was mobilised and consumed as an aspect of routine household practices.

### **Intra-site analysis?**

*Is there any explicit comparison between the ceramic assemblages from different areas and / or phases of the site?*

With one or two notable exceptions, intra-site analysis tends to emphasise a temporal framework, focusing upon the comparison of material from different chronological phases. Less attention is paid to exploring the possibility that differences in assemblages might reflect varying function or activities. This is important, as without an understanding of how the debris from a range of

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<sup>13</sup> Whiting 2007, 80–81.

<sup>14</sup> Chesson 2000, 366.

common activities present themselves in ceramic form, and as sherd assemblages in particular, it will remain difficult to undertake inter-site comparisons without the ever-present possibility that the differences emerging may be attributable to a diversity of function, rather than genuine differences of practice.

### **Inter-regional comparison**

*Is there any explicit comparison of overall trends in form or fabrics at this site, and those documented at contemporary sites in the region?*

Clearly the range of possible inter-regional comparisons will be restricted to those traits that have been studied and reported in the first place. Thus, the absence of systematic studies of typology, fabrics or accurate quantification from any report, will close down the range of comparative investigations to which the data from that particular site can contribute. Thus, the choices made by the original excavator will determine the long-term value of the final published report. In practice most reports tend to focus upon comparison of vessel shapes, and do this on a type-by-type basis. Comparative discussion of the overall profiles of the assemblages from two or more sites, are considerably less frequent. Of course, one might reasonably argue that detailed inter-site analysis lies beyond the remit of a descriptive excavation report, which should quite properly concentrate upon presenting the evidence from the site concerned. However, given the striking absence of such comparisons from the journal literature, it seems reasonable to ask, given the resources devoted to ceramic reports within excavation publications, whether a rather more analytical approach might provide an important element of 'added-value'.

### **Discussion of assemblage?**

*Is the nature of the assemblage as a whole discussed with a view to providing insights into its functionality?*

This was one of the most interesting issues in that in most cases discussion of individual assemblages was focused largely upon their chronological positions. The ever-increasing power of radiometric dating, especially when coupled with Bayesian statistical methods<sup>15</sup> is allowing increasingly sophisticated approaches to the construction of chronologies, and the technique is now being employed in the east Mediterranean<sup>16</sup>, and while it may not yet have revolutionized chronology, its implications for existing models of culture have been underscored by S. Campbell's<sup>17</sup> recent dissection of the 'Halaf Culture'. In fact, the release of ceramic studies from their traditional concern with chronology may provide us with an opportunity to address areas of analysis that have not received the

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<sup>15</sup> Buck – Cavanagh – Litton 1996.

<sup>16</sup> Banning 2007; Manning *et al.* 2006, Sharon *et al.* 2007.

<sup>17</sup> Campbell 2007.

attention which they deserve. If so, this might be a good time to reconsider exactly what it is that we wish to gain from ceramic studies.

### **Quantification of assemblage?**

*Is quantified data on the different components of the assemblage clearly presented?*

The main issue here is that even when assemblages are quantified to some extent, and some are not, this is generally undertaken in a selective manner, and it is not always easy to establish exactly how this was done (e.g. all sherds, diagnostic sherds only, all restorable profiles, whole vessels only; material from all deposits, only that from primary loci, only that room floors *etc.*) or what proportion of the original evidence the published data actually represents. As a result it can be hard to compare data between different sites. Although there have been several discussions of the ways in which ceramic data might be quantified and assemblages compared<sup>18</sup>, even when the methods employed are clearly explained, it is not immediately obvious how one might relate statistics from a site where all sherds from primary loci were counted, to data from a site where only restorable vessels from floors were quantified. The issue of quantification also has serious implications for the value of published illustrations. To take an example, unless the reader is told whether the bowl rim depicted in Fig. 101.4 is unique, or represents one of sixty-four such examples that were recorded from Phase VI, the value of the drawing is massively reduced, and meaningful inter-assemblage comparisons rendered immeasurably more difficult.

### **Listed by context?**

*Is it possible to establish the stratigraphic origin of individual sherds, and thus to begin to reconstruct the assemblages from different stratigraphic units?*

While most reports appear to focus upon presentation and analysis of pottery by stratum or chronological period, researchers seeking to undertake contextually-sensitive analyses require data that is presented in such a way as to facilitate the reconstruction of the assemblages from individual stratigraphic units, or groups thereof. Without such data, for example, it is impossible to compare the nature of assemblages from rubbish deposits, with those from contemporary floor surfaces. In practice, matters are complicated by the fact that, on the one hand, many reports provide contextual information only for those sherds which are illustrated, while, on the other hand, it is not always clear what proportion of the material from any single context is actually represented by the illustrated material. That said, in the absence of either systematically defined typologies or fabric descriptions, it is not clear how the remaining material could realistically be discussed.

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<sup>18</sup> Orton – Tyers – Vince 1993, 166-175; Rice 1987, 290–293.

## List of contexts provided?

Put bluntly, without ready access a list of locus or context numbers and appropriate information as to their location, integrity and nature, further analysis is redundant. The very fact that such lists are not always provided within specialist pottery reports, suggests that the authors (or more likely, the excavators) were not concerned to provide readers with the means to attempt the kind of contextual analyses that they themselves have not undertaken. A case of good practice is provided by the report on the excavations at the tell of Kilise Tepe in southern Anatolia in which contextual information is presented in an accessible format<sup>19</sup>.

## Ceramic reports: discussion

The central role of pottery in the last century or so has been in the construction of chronologies, and there is no doubt that it has proven effective as a means of placing levels and phases at different sites within relative chronological frameworks. All of the reports listed in Table 2 contained substantial amounts of valuable information with respect to local chronological developments. Some also make important contributions towards building wider syntheses. Examples included effective discussion of material within its local regional context<sup>20</sup>, a very clear account of macro-fabrics and recording procedures<sup>21</sup>, and useful reporting of finds within their specific stratigraphic contexts<sup>22</sup>. Several authors made important observations with regard to intra-site variability. E. Yannai<sup>23</sup> compares the material from settlement layers in Area S and with that from the tombs and Fosse Temple exposed by earlier excavators. S. Penner<sup>24</sup> provides valuable pointers to the nature of the ceramic forms associated with different types of activity at Kamid el-Loz. This has created an important point of reference for researchers working at other sites, and who are seeking to interpret the nature of the activities represented by ceramic assemblages recovered from deposits, the original function of which was not clearly indicated by architectural or other evidence.

As things stand, recording systems are not always designed to capture the full range of data, and important areas of information are not collected systematically. Many reports remain centred upon chronological studies, with respect to both earlier and later material from that site, and at a regional level, and provide little analysis beyond this. With the current database it is hard to see how systematic inter-assemblage comparisons can be undertaken using criteria other than shape typology, and that at times on no more than a presence/absence basis. It is rare for a report to provide a real sense of a ceramic assemblage as an indicator of a functioning community, or to make a

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<sup>19</sup> Postgate – Thomas 2007, 641–684.

<sup>20</sup> Liebowitz 2003b; Yannai 2004.

<sup>21</sup> Thalmann 2006.

<sup>22</sup> Fischer 2006.

<sup>23</sup> Yannai 2004, 1055–1061.

<sup>24</sup> Penner 2006.

genuine effort to compare and contrast the assemblage as a whole with material from other sites in the region deemed to be broadly contemporary.

While the often inconsistent manner in which the primary ceramic data are recorded, analysed and published can constitute a barrier to its use in synthetic studies, such efforts ought to be assessed in context. For example, it is not unreasonable for excavators working in an area that is poorly documented to provide a traditional shape-based presentation of their ceramics as a first step towards the characterization of the material from that region. However, such an approach is less acceptable in those areas where the basic sequences are fairly well documented. Researchers need to show a greater contextual sensitivity to the questions which it is most appropriate to ask of ceramic data.

The problems integral to the current stylistic and classificatory morass are well illustrated by T. Bagh's<sup>25</sup> discussion of the relationship between what are often portrayed as the three main classes of Syrian Middle Bronze Age painted ceramics: Levantine Painted, Syro/Cilician and Khabur wares. The essential problem is that any analysis which uses pre-existing, and often poorly defined ceramic categories as its 'objects of study', risks working with analytical units which are simply not fit for purpose. S. Campbell<sup>26</sup> has provided an account of the confusion caused by continued adherence to poorly-defined 'legacy' classifications in an EBA context. Moreover, the assumption that such groups, which are primarily defined upon stylistic criteria, present 'self-evident' units of comparison and analysis, has meant that researchers are not always able to view the vessels assigned to these wares in terms of their place within, or relationship to, the wider assemblages of individual sites.

### ***Dedicated ceramic studies***

The lack of publications dealing with ceramics in the specialist journals analysed in Table 1 might be thought to reflect the existence of a third class of publication, edited thematic volumes. A number of such have appeared in recent years, arising from workshops and conferences focused upon pottery, and its analysis and interpretation. These also need to be considered if we are to gain a clear overall impression of the place of ceramics within wider archaeological debate.

Several such volumes have recently been devoted to individual classes of LBA pottery<sup>27</sup>. In all cases these volumes contained a majority of papers that focused primarily upon either the presentation of groups of material from individual sites, or which sought to use the presence of the particular ware of interest to establish inter-site or inter-regional chronological synchronisms. In the case of the most recent of these volumes<sup>28</sup>, the contributions, taken as a group, provide an excellent examination of a single ware class, although the overall perspective is

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<sup>25</sup> Bagh 2003.

<sup>26</sup> Campbell 2000.

<sup>27</sup> Åström (ed.) 2001; Karageorghis (ed.) 2001; Hein (ed.) 2007.

<sup>28</sup> Hein (ed.) 2007.

essentially 'top-down'. That said, the majority of contributions say little about the way in which Red Lustrous ware was adopted and utilised within different local contexts. So while the contributions in these volumes are perfectly useful, they are not so different in terms of their overall approach from the various studies discussed above.

Other recent edited volumes<sup>29</sup> have become key points of reference by providing overviews of the ceramic evidence from periods and regions, for which the data has been hitherto poorly synthesized. However, in the first these volumes<sup>30</sup>, the majority of the contributions present material from individual sites or phases, and with a clear emphasis upon discussion in terms of traditional shape typology. Thus while individually interesting, many contributions appear to follow firmly in tracks laid down by traditional analysis and there is little sense within the volume of the value of assemblages as indicators of functioning communities, or as a guide to social and economic relationships.

The importance of the volume edited by al-Maqdissi *et al.*<sup>31</sup> lies in its provision, for the first time, of a series of region/period summaries of pottery from south and west Syria. It therefore constitutes a major contribution to the identification of large-scale 'ceramic regions', and the chronological synchronisms between regional ceramic-sequences. In general, the regional summaries are based around the presentation of forms deemed characteristic of the particular chronological period concerned, supported by a list of the sites at which these have been recorded. In some cases<sup>32</sup> there are brief descriptions of the fabrics. It is interesting that S. Mazzoni<sup>33</sup> begins her account of LBA pottery in NW Syria with a summary of the political framework, presumably to provide a context within which ceramic change might be understood. Taken as a whole the papers seek to define ceramic horizons which are deemed characteristic of particular spatial zones over particular chronological periods, and then to locate specific strata at different sites within these. We are again dealing with what is primarily a top-down characterisation, in which the aim is to reduce variability by assigning specific information to broader groups. It is my contention that the essential conservatism of ceramic studies, demonstrated by a strong adherence to traditional procedures, reflects a situation in which many scholars retain a fairly limited view of the potential of ceramic data. This I would attribute to the primacy assigned to the very text-based historical framework that was observed to underpin most 'archaeological' summaries. Very similar issues pertaining to the study of the Iron Age of the southern Levant, have been discussed by C. M. Whiting<sup>34</sup>.

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<sup>29</sup> Hausleiter – Reiche (eds.) 1999; al-Maqdissi – Matoïan – Nicolle (eds.) 2002.

<sup>30</sup> Hausleiter – Reiche (eds.) 1999.

<sup>31</sup> al-Maqdissi – Matoïan – Nicolle (eds.) 2002.

<sup>32</sup> e.g. Nicolle 2002.

<sup>33</sup> Mazzoni 2002, 130.

<sup>34</sup> Whiting 2007, 61–64.

Probably the most impressive study of LBA ceramics to appear in recent years is Pfälzner's<sup>35</sup> monograph on Mittanian and Middle Assyrian pottery from sites in north-east Syria. This pioneering analysis sought to undertake a systematic analysis of ceramic assemblages from the region, which encompassed vessel forms, fabrics, surface treatment and diagnostic sherds, and fully quantified basis whenever possible. As a result P. Pfälzner was able to go far beyond chronological issues and consider the social and political implications of ceramic regionalism, and the significance of both elements of continuity and change which can be seen in the ceramic economy of the region between the 15<sup>th</sup> and 12<sup>th</sup> centuries BC. In many ways this text offers a model for others to follow. However, from the standpoint of the issues raised in the present paper, it is important to stress that the core elements of the analysis, in particular the quantified data and the all-important form and ware series, were established using the ceramic assemblages from two sites, Tell Bderi and Tell Seh Hamad, to which Pfälzner had personal access. The collation of comparative material appears to have relied in many cases upon personal visits made by the author to excavation houses and storerooms. As many of the sites concerned were still under excavation at the time when his research was undertaken, this was a sensible strategy on P. Pfälzner's part. However, the implication that reliable data, at least in terms of that suitable for detailed inter-assemblage comparisons, is best obtained by personal examination of excavation collections, once again raises the sensitive issue of the true value of final ceramic reports. This point is underscored by the relatively small number of the latter to have appeared since the publication of P. Pfälzner's book.

### ***Some issues to consider***

The classes of ceramic data which dominate many excavations are those recorded by W. F. Albright<sup>36</sup> at Tell Beit Mirsim in the 1930s, and were indeed appropriate for a world in which pottery provided the discipline with its prime chronological tool, and the main means of establishing of synchronisms between the stratigraphic phasing of different sites. Part of the issue, as L. G. Herr<sup>37</sup> has recently observed is that as a result of inconsistent and incomplete publication, ceramic analysis as undertaken in many parts of the Middle East remains something of an 'oral' tradition, into which younger scholars are inducted. As such, it is likely that a range of dispositions and assumptions are transmitted imperceptibly alongside skills and knowledge.

The difficulties posed for regional analysis by the restrictions imposed by having to work mainly with shape-typology and a very general characterisation of ceramic fabrics are illustrated by S. Mazzoni's<sup>38</sup> review of cultural borders in Syria. In this she seeks to identify 'ceramic provinces' which are suggested to represent areas of frequent cultural interaction. However, the crucial weakness in

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<sup>35</sup> Pfälzner 1995.

<sup>36</sup> Albright 1938.

<sup>37</sup> Herr 2002, 54.

<sup>38</sup> Mazzoni 2000.



the argument<sup>39</sup> is the absence of an explanation of the relationships between cultural practices and spatial distributions. This is not S. Mazzone's fault, but reflects the inherent limitations of the data available to her. The approach advocated by A. T. Smith<sup>40</sup> requires "an account of the monitoring of social boundaries, across which certain material culture items move but others do not, and of shifting meanings for these items as they move from local to regional emplacements". Sadly, the data available in many excavation reports is inadequate for this kind of research. Useful examples of what can be achieved with suitable material have been published in recent edited volumes<sup>41</sup>.

Scholars seeking to define and discuss ceramic regions need to give careful consideration to the ways in which these are conceptualised, how ceramic styles might be transmitted through time and space, and what ceramic distributions might actually mean in terms of social, economic or cultural interaction. The difficulty of establishing bounded ceramic regions for Iron II Syria has recently been underlined by M. R. Whincop<sup>42</sup>, who has demonstrated that the spatial extents of the transport, serving and cooking vessels occurring at Tell Nebi Mend are quite distinct.

This position is encapsulated in an overview of Early Bronze Age ceramics from the southern Levant<sup>43</sup> which argued that static classificatory frameworks provide an inadequate description of ceramic regions which "should not be seen as constituting 'normative' bounded entities, but are better understood as transitory points of convergence within a diverse range of ceramic production and procurement systems". Thus when the assemblage from any single site is understood as the aggregate result of separate distributions, each reflecting a particular combination of, social, technical, economic, taphonomic and political factors, it becomes clear that bounded distributions, where these can be demonstrated represent not the natural order of things, but a phenomenon to be explained.

### **Cost-benefit analysis**

The comments made on the excavation reports were based upon an hour or two spent working with each. It is therefore possible that I have missed information that was presented in sections of the text which I did not identify as obviously relevant to my interests. If the summaries above are incorrect to any great extent, I apologise here and now to the authors. However, if that is the case, then I would make the point that ceramic reports are meant to convey information in a readily accessible fashion. They are not meant to be read cover to cover. In our information-rich world, there is a limit to the amount of time and effort that researchers can realistically be expected to devote to extracting the information

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<sup>39</sup> Smith 2001, 370.

<sup>40</sup> Smith 2001, 370.

<sup>41</sup> Chilton (ed.) 1999; Stark (ed.) 1998.

<sup>42</sup> Whincop 2007, 205–6 Fig. 12.

<sup>43</sup> Philip – Baird 2000, 23.

that they require. Sources that are hard to use will score poorly on a 'cost-benefit' analysis.

Excavations frequently devote entire volumes to the reporting of ceramic data, or at the very least a substantial proportion of a single volume final publication. Such an approach is consistent with the situation on a typical Bronze Age tell excavation, whereby the collection, washing, sorting, handling recording and analysis and storage of pottery may well absorb a significant proportion of the total resource employed. My estimate, based on my own experience, is that pottery will absorb no less than 25–35 % of the total resource required for fieldwork, post-excavation analysis and publication combined. Resource usage on this scale is consistent with pottery constituting a major source of archaeological evidence, the detailed publication of which is considered of great importance to the research community and which ought to place ceramics at the heart of the interpretative process. However, as we have seen, this does not appear to be the case in practice.

Any business analyst looking at the relationship between the resources consumed by ceramic studies and the resulting outputs would remark upon the poor alignment between the two. They might suggest that our 'business processes' have not been properly planned. In particular they would note that we appear to be devoting large amounts of effort to collecting data that does not appear to be very widely used, except in a most basic way. Perhaps we should consider whether the effort involved in collecting ceramic data can be justified in terms of what we subsequently do with it.

### **How did we get here?**

In my view, the problem lies in the nature of the information that is traditionally presented in excavation reports, and which reflects the role of pottery as understood in the mid-20<sup>th</sup> century, rather than the information necessary to tackle contemporary research questions. I suspect that in addition to chronological concerns, culture-history was also influential in shaping research traditions in the Near East. In the words of V. G. Childe<sup>44</sup>:

"We find certain types of remains – pots, implements, ornaments, burial sites, house forms – constantly recurring together. Such a complex of regularly associated traits we shall term a 'cultural group' or just a 'culture.' We assume that such a complex is the material expression of what today would be called a people. In such cases of the total and bodily transference of a complete culture from one place to another we think ourselves justified in assuming a 'movement of people.'"

Such a view was consistent with the needs of a historical narrative that was expressed largely in terms of the rise and fall of regional and 'ethnic' polities,

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<sup>44</sup> Childe 1929, v–vi.

such as the Hittites, Canaanites and Mitanni. Moreover, reconstructions of this kind, which sought to characterise broad regional phenomena required no more than a normative approach to the material evidence. In contrast, comparative studies of the relationships between developments in ceramic forms, technology, and fabrics in different regions, or discussion of the implications of the simultaneous existence of both very localised and spatially extensive forms, remain the exception<sup>45</sup>. Moreover, the relatively rare substantive studies of ceramic technology<sup>46</sup> have focused upon technology *per se*, and have not always viewed ceramic artefacts as a dynamic component of practice.

While archaeologists working in the Middle East have stressed the value of pottery as a chronological indicator, evidence from a number of contributions in this volume points to a marked continuity between LBA pottery and that of the preceding MBA, in the Levant at least, and suggests that many ceramic forms have but limited value as chronological indicators<sup>47</sup>. However, this kind of information only becomes apparent when good quantified data allows the researcher to compare the relative frequencies of different vessel forms and fabrics over time. A good example of this approach, which remains less frequent than one might wish, is W. P. Anderson's<sup>48</sup> diachronic analysis of the Late Bronze and Early Iron Age ceramics from Sarepta.

In fact, we have been slow to grasp that stability requires no less in the way of explanation than does evidence for change. However, the visible presence of elements of both change and continuity within an assemblage should prevent us from resorting to weak explanations such as 'conservatism', and should encourage us to consider why the same potters or workshops might have been manufacturing both vessel-types demonstrating strong continuity of form, and others that were subject to more rapid change. This of course, is exactly the sort of thing that, in the absence of the excavation of potters' workshops, might be demonstrated most effectively through the scientific analysis of ceramic pastes.

### ***Ways ahead***

In fact, while discussion has generally focused on variation in material culture itself, some would argue that our interest should be centred upon the conditions under which cultural knowledge is maintained or modified over time, as it is this that can be used to demonstrate changes in cultural meaning<sup>49</sup>. This may require the identification of elements of technique, in order to understand *chaînes opératoires* and thus map the mechanisms of learning and the transmission of technical information which are seen as key to the identification of social

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<sup>45</sup> But see London 1991; Wood 1990.

<sup>46</sup> e.g. Franken 1974; London 1991; Rast 1978 – with detailed illustrations and ware descriptions by Glock and his team.

<sup>47</sup> e.g. Caubet this volume.

<sup>48</sup> Anderson 1988.

<sup>49</sup> Roux – Courty 2005; Roux 2007.

groups<sup>50</sup>. For such purposes information on matters such as raw materials and manufacturing technology, detailed contextual analysis and accurate quantification are necessary. Such information is essential if we seek to bring ceramic studies out of their current typological and stylistic impasse. Yet none of this is routinely presented in current excavation reports from the Near East.

We need 'joined-up thinking', to create the synergies that will allow us to extract maximum value from the work that we do. For example there is no point in publishing hundreds of line-drawings of rim profiles unless we are told how the material illustrated relates to that excavated across the various contexts and phases. Equally, the value of petrographic work is much reduced without a clear explanation of the relationship between petrographic groups, and the macrofabrics in terms of which the assemblage is usually discussed elsewhere in the text. As C. Knappett and Kilikoglu<sup>51</sup> (2007: 241-242) make clear, petrography and macroscopic analysis must be carefully integrated with the former following the latter, and with an initial emphasis not on 'exotic' sherds but on the identification of local fabrics, for which a survey of local clays and geology is essential.

Examples of what can be done to consider assemblages in terms of the activities with which they might have been associated, include the recent functional analysis of the material from the well-preserved LBA destruction level at Tell Bazi<sup>52</sup>. Here, careful contextual analysis combined with input from textual sources offers a way to understand the various components of a ceramic assemblage, not from the standpoint of abstract archaeological typology, but in terms of something more akin to 'emic' categories. With respect to this material I find three questions of particular interest. The first is whether researchers will now re-evaluate other assemblages in light of the evidence from Tell Bazi. The second is how far it will be possible to extend the insights gained from this unusual situation to the more typical tell-site deposits, and the third is whether the data from Tell Bazi will, following the eventual publication of the pottery in excavation report format, be discussed within more conventional parameters.

Another good example is R. Hempelmann's<sup>53</sup> analysis of the Bronze Age pottery from Tell Halawa A which presents not merely shape, ware and decoration types, but defines the first of these in terms of the various components (*i.e.* combinations of base, rim and body form) from which they are constructed. The subsequent analysis of the chronological distribution of the various components, both independently and at the level of the vessel types which they define, and the statistical analysis of different vessel classes offers the kind of finely textured information that is required if we are to begin to undertake inter-site studies that

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<sup>50</sup> Gosselain 2000.

<sup>51</sup> Knappett and Kilikoglu 2007, 241–242.

<sup>52</sup> Otto 2006, 85–103; Otto this volume.f

<sup>53</sup> Hempelmann 2005.

can go beyond simple comparisons of rim-shape and begin to address more subtle aspects of vessel design, structure and manufacture, and thus questions pertaining to ‘materiality’ in its widest sense.

That said, there are issues which have not yet been embraced by LBA studies. For example, it is now widely accepted within the social sciences that social and economic structures are generated, maintained and often transformed by day-to-day routines and actions, termed practice by A. Giddens<sup>54</sup>. Thus our focus upon formal similarities may have led us to neglect the relationship between routine practices and objects which is central to understanding the manner in which people both construct and are shaped by their social and material worlds<sup>55</sup>. Examples from near eastern contexts dating to the third millennium BC include the connection between certain vessel forms and the spread of drinking practices<sup>56</sup>, the impact of the former upon the role of food-consumption in social contexts<sup>57</sup> and the role of imported vessels in restructuring funerary practices on LBA Cyprus<sup>58</sup>.

However, it is not just the use and consumption of objects that shape social relations. The ways in which artefacts are made, the acquisition of raw materials, the loci and techniques of manufacture, the transmission of specialist knowledge and the social relations that underlie production, all have an important role in the constitution of social and economic relationships. In this way material culture items are involved in what I. Hodder<sup>59</sup> terms ‘material entanglement’. As people both construct, and are shaped by, their social and material worlds<sup>60</sup> ceramics, as the most commonly encountered element of Bronze Age material culture, ought to sit at the centre of many investigations of Bronze Age society. However, as we have indicated above, at present they do not.

In my view, we should attempt to shift the focus of ceramic studies away from formal comparisons and towards a consideration of the social and economic contexts within which vessels were produced, transported, used and discarded. If we still wish to produce narrative syntheses, these might be achieved by a move away from fitting our data into a framework built around the historical record, and towards a bottom-up approach which seeks to understand patterns and contrasts at a variety of scales. Only in this way will it be possible to use ceramic data to investigate the way in which LBA communities were organized and how they engaged with their material culture as part of both routine daily practice, and through periodic events and ceremonies.

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<sup>54</sup> Giddens 1984.

<sup>55</sup> Bourdieu 1990; Gosselain 1998.

<sup>56</sup> Joffe 1998; Mazzoni 1994.

<sup>57</sup> Bunimovitz – Greenberg 2004.

<sup>58</sup> Steel 1998.

<sup>59</sup> Hodder 2006, 184.

<sup>60</sup> Gosselain 1998; Hodder – Cessford 2004; Robb 2007.

This is by no means an impossible task, as archaeologists working on Crete, those focusing on Knossos in particular, have developed a systematic account of ceramic forms and fabrics which allows the effective characterization of assemblages, discussion of manufacturing methods, and the ready identification of both non-local Cretan and non-Cretan ceramics<sup>61</sup>. With such a systematic knowledge of the regional ceramic data, it has proved possible to investigate social, political and economic dimensions of society on Bronze Age Crete through its pottery.

For example, analysis of the composition of assemblages in disposal contexts has documented changes in elite social practices through the Early Minoan period<sup>62</sup>. A focus during Early Minoan I on large bowls indicating the shared consumption of food, was superseded by an interest in drinking, as evidenced by the appearance of conical cups during Early Minoan IIA. These cups were then replaced by more elaborate footed goblets during Early Minoan IIB. Petrographic studies undertaken by P. M. Day and D. E. Wilson<sup>63</sup> have improved our understanding of the way in which manufactured goods were mobilized in order to facilitate their consumption at Knossos. In particular the demonstration that by no means all fine tablewares from the site were manufactured locally, raises interesting questions regarding the relative importance of palace craftworkers, as opposed to specialists located in other regions, and the mechanisms by which non-local manufactured goods were mobilized for palace consumption. On a rather different tack, C. Knappet<sup>64</sup> has used a *chaine opératoire* approach to suggest that the greater technological heterogeneity revealed at Knossos indicates that the potters working there, were of more diverse origins than those identified at other sites where potters' motor habits appear to be more homogeneous. While these are but examples, they should serve to illustrate how ceramic data have been used in the context of another LBA complex society.

There are encouraging signs that research in the Near East is also beginning to use ceramic data to aid our comprehension of political and economic structures. The pioneering efforts of P. Pfälzner<sup>65</sup> no longer stand in quite such isolation. For example, M.-H. Gates<sup>66</sup> has suggested that the highly standardized ceramic practices evident in parts of Anatolia may indicate the operation of the Hittite empire, while D. T. Potts<sup>67</sup> has commented on the relationship between Mesopotamian ceramics and the terms for vessels relating to various activities which appear in Babylonian textual sources. As far as future developments are concerned, the direction taken might depend on the impact of the papers in this book, and, of course, the programme or statement that emerges in the editors'

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<sup>61</sup> e.g. MacDonald – Knappet 2007; Momigliano (ed.) 2008.

<sup>62</sup> Day – Wilson 2002.

<sup>63</sup> Day – Wilson 1998.

<sup>64</sup> Knappet 2004.

<sup>65</sup> Pfälzner 1995.

<sup>66</sup> Gates 2001.

<sup>67</sup> Potts 1997, 140–149.

summing-up. Personally, I will be disappointed if the next decade does not witness a significant revision in our approaches to ceramic data.

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